

# What Tuning Can Do for You

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# What is Available:

- GM service remedies
- Improve a stock engine
- Support for headers
- Reduce light weight flywheel noise
- Support for top end porting
- Support for cylinder head porting
- Secondary intake port throttle elimination
- Disable VATS
- Low emissions
- What can't be done

# GM Service Remedy for '90's

- GM issued AYBK with Product Service Bulletin 476503, dated February, 1994
- It was released to address problems with idle fluctuation after a hot restart, increase in idle speed after a hot restart and excessive engine speed during coast down to a stop with the clutch disengaged.
- Reduces the idle down time after the 1500 rpm starting speed by about 50% or two seconds
- Disables the 'Up-Shift' light on the cluster

# GM Service Remedy for '91's

- GM issued BFXB also with Product Service Bulletin 476503 dated February, 1994.
- It was released to address hard starting during the restart of a hot engine.
- Reduces excessive engine speed during coast down to a stop with the clutch disengaged.

# GM Service Remedy for '92's

- GM issued BPPA. No Product Service Bullitin was released by GM
- I have noticed that the idle speed is 650 rpm like the '90 and '91 cars. The factory calibration idle speed for the early '92's is 575 rpm.

# GM Service Remedy for '93's and '94's

- GM issued BMCB with Product Service Bulletin 576514 dated 18 September, 1995
- It addresses a problem with a sag or surge on light throttle acceleration below 2500 RPM

# Improvements for Stock Engines

- The ignition spark advance can be increased
- The cooling fans can be turned on earlier
- The fuel delivery at wide open throttle is slightly rich in the stock calibration
- The stock calibration retards the ignition spark advance when the intake air temperature is over 90 degrees F. This can be revised to 160 degrees and the amount of retard is decreased.
- The engine control system tends to sense false ignition spark knocks during fast throttle opening transitions at lower engine speeds. This can result in a 10 hp power reduction for about a second after the throttle transition.
- The CAGS (1 to 4 shift) can be disabled. Turns off the 'One to Four' lamp too.
- Set the power key default to Full Power on '91 and up cars

# Support for Headers

- Add fuel to support +25 hp from headers
- Enable the anti-backfire mode
- Eliminates the deceleration fuel resumption surge at 25 mph

# Support for a Light Weight Flywheel

- 750 rpm idle speed is usually the quietest

# Support for Top End Porting

- Add fuel to support +35 hp from top end porting on '90 – '92 cars
- Add fuel to support +20 hp from top end porting on '93 – '95 cars

# Support for Head Porting

- Add fuel to support +35 hp from cylinder head porting

# Secondary Port Throttle Elimination

- All of the secondary throttle control system can be removed.

# Disable VATS Fuel Control

- The VATS fuel control can be turned off
- The second prong of VATS is the starter lockout. Remove the start relay and insert a jumper from socket pins 30 to 87.

# Improve Emissions Performance

- Reduce the spark advance
- Turn the fans on later to reduce HC
- Turn the fans on earlier to reduce NO<sub>x</sub>
- Increase the idle speed
- On '93 and up cars, reduce the EGR enable speed to 13 mph

# What Can't Be Done

- Reduce a high idle speed
- Reduce fueling at low engine speeds and loads
- Adjust the speedometer

# Accessing the Calibration Chip

